

REMARKS

I. Status of claims

Applicants have amended claim 1-27 to improve clarity. Upon entry of this Amendment, claims 1-27 are pending and under current examination.

II. Regarding the Office Action

In the final Office Action¹ of March 20, 2006, the Examiner objected to claims 1-27 for informalities; rejected claims 5, 23, 25, and 27 under 35 U.S.C. § 112, second paragraph, for being indefinite; and rejected claims 1-27 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,484,297 to *Dixit et al.* ("*Dixit*"). Applicants address the objections and rejections below.

III. Objection to the informalities in the claims

In response to the Examiner's previous objection to the use of "dispersion" in the claims, Applicants amended the claims to instead recite the term "variation." The use of "variation" in the claims does not constitute new matter because illustration of "variation" is disclosed in the originally filed specification and shown in the drawings. "Dispersion" in the original specification clearly refers to variations in electrical and physical characteristics which need to be considered when preparing the delay information file.

For example, Applicants' specification at pages 8-11, describes a voltage drop Vdr1 as an example of a variation in an electrical characteristic and the manner in which the voltage drop is considered in preparing a delay information file F8.

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether or not any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

In the Office Action, the Examiner objected to the use of functional language in claim 1. Applicants traverse the objection. However, to advance prosecution, Applicants have amended claim 1 to recite the step of preparing a delay information file.

The Examiner objected to claims 2, 9, and 16 as containing recitations not supported by claims 1, 8, and 15. Applicants submit that the proposed amendments to claims 1, 8, and 15 clearly reflect the invention and support the recitations in claims 2, 9, and 16.

The Examiner objected to claims 3, 10, and 17 for grammatical errors. Applicants propose amending claims 3, 10, and 17 to improve clarity.

The Examiner objected to claims 4, 11, and 18 with regard to recitations of the "file editing unit." Applicants propose amending these claims to improve clarity. Support for the amended claims can be found in the specification at, for example, page 6, lines 22-25.

The Examiner objected to claim 5 alleging that the "verifying" step provides no resulting action. Applicants traverse the objection. Applicants propose to amend claim 5 to depend from claim 2, and propose to amend claim 2 to recite specific actions resulting from the simulation. Therefore the Examiner's objection regarding claim 5 is overcome.

The Examiner objected to claims 12 and 19 for unconventional languages. Application traverse the objection. However, to advance prosecution, Applicants propose to amend claims 12 and 19 to improve clarity.

The Examiner objected to claims 6, 13, and 20 as reciting an inconsequential step. Applicants traverse the objection. Applicants propose to amend claims 6, 13, and

20 to depend from claims 2, 9, and 16, and to more clearly recite specific actions resulting from the simulation.

In the Office Action, the Examiner objected to claims 7, 14, and 21 for the recitations of "said group" and "said size." Applicants traverse the objection. However, to advance prosecution, Applicants propose to amend these claims to improve clarity.

In the Office Action, the Examiner objected to claims 23, 25, and 27 as containing an inconsequential step, and the use of the term "capacity." Applicants traverse the objection. Applicants propose to amend claims 23, 25, and 27 to depend from claims 2, 9, and 16, and to clearly recite specific actions resulting from the simulation. Further, Applicants note that one of the meanings for "capacity" is capacitance (Merriam-Webster, 2003). Applicants propose to amend the claims to recite "capacitance" instead of "capacity" in these claims to improve clarity. The term capacitance is supported in the specification at, for example, page 9, line 14, page 14, lines 6-10, and Figs. 4A and 9A.

In view of Applicants' proposed amendments to the claims, the Examiner's objections should be withdrawn.

IV. Rejection of claims 5, 23, 25, and 27 under 35 U.S.C. § 112

In the Office Action, the Examiner rejected claims 5, 23, 25 and 27 under 35 U.S.C. § 112, second paragraph. Applicants have amended these claims to improve clarity. The amended claims are clearly supported by the specification. Applicants respectfully submit that claims 5, 23, 25, and 27, as amended, particularly point out and distinctly claim the subject matter. Accordingly, the rejections under 35 U.S.C. § 112, second paragraph, should be withdrawn.

V. Rejection of claims 1-27 under 35 U.S.C. § 102(e)

Applicants traverse the rejection of claims 1-27 under 35 U.S.C. § 102(e) because *Dixit* does not teach each and every element of these claims. In order to properly anticipate Applicants' claimed invention under 35 U.S.C. § 102(e), each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Further, "[t]he identical invention must be shown in as complete detail as is contained in the...claim." See M.P.E.P. § 2131 (8th Ed., Aug. 2001), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131 (8th Ed. 2001), p. 2100-69.

Dixit discloses methods for calculating delays for cells in ASICs (Abstract). In *Dixit*, delays are computed by considering not only the process (P), voltage (V), temperature (T) but also input ramptime (R) and output load or fanout (F) of the cells by fitting the delay at four corner points for derated PVT condition into a non-linear equation which is a function of P, V, T, R and F (Abstract). *Dixit* discloses that given R and F, the values for Kp, Kt and Kv can be solved by using the disclosed equations (Col. 7, lines 45-46). Further, after solving for Kp, Kt and Kv, those values are applied to another equation to calculate propagation delays for the cells (Col. 7, lines 47-59).

However, *Dixit* does not teach a delay information operating part that prepares a delay information file, the delay information file incorporating design information and each influence of variation for each region in a chip on the basis of a variation rule file, as required by claim 1. In the Office Action, the Examiner alleged that the collection of calculated delays for the cells teaches preparing a delay information file (OA, at 10).

However, *Dixit* does not disclose such a file with a collection of delays as described by the Examiner. Further, Applicants submit that claim 1, as proposed to be amended, clearly requires preparing the delay information file.

Moreover, contrary to the Examiner's assertion, *Dixit* does not disclose a logical simulation part which receives design information and a delay information file to carry out a logical simulation of an integrated circuit, as required by claim 1. The Examiner stated in the Office Action that *Dixit* discloses the use of a SPICE simulator that uses a delay calculation at Col. 5, lines 7-20 (OA, at 9). However, in that portion of the specification, *Dixit* discloses using a SPICE simulator to calculate factors later used in the delay calculation. The SPICE simulation uses nominal P, V, T, and the netlist of the cell as parameters while varying input ramp time R and the output load F (Col. 5, lines 13-15). No delay information is mentioned as a parameter in this simulation. In fact, *Dixit's* process stops at deriving the equation to calculate the propagation delay for a cell, therefore this process is not concerned with how the propagation delay result is used. As such, this element of claim 1 is neither expressly nor inherently disclosed in *Dixit*.

Thus, *Dixit* fails to teach each and every element of claim 1. Therefore *Dixit* cannot anticipate claim 1 under 35 U.S.C. 102(e). Accordingly, Applicants request the withdrawal of the rejection of claim 1, and claims 2-7 which depend from claim 1, and the allowance of claims 1-7.

Independent claims 8 and 15, although of different scope, recite features similar to those of claim 1. Therefore, for at least the reasons *Dixit* does not anticipate claim 1, *Dixit* also does not anticipate claims 8 and 15. Accordingly, Applicants request the

withdrawal of the rejection of claims 8 and 15, and claims 9-14 and 16-21 which depend from claims 8 and 15, respectively, and the allowance of claims 8-21.

Further, claims 22-27 are also patentable over *Dixit* at least due to their dependence from one of the independent claims 1, 8, and 15.

VI. Conclusion

Applicants respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-27 in condition for allowance. Applicants submit that the proposed amendments of claims 1-27 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

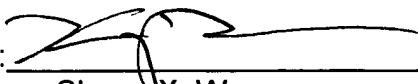
Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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